TRU TeamWorks

June 26, 2006

WIPP Quick Facts

(As of 06-25-06)

4,746
Shipments received since opening

39,186
Cubic meters of waste disposed

79,977
Containers disposed in the underground

Mine Pager Phones

Mine pager phones are located on the surface (above) and extensively throughout the WIPP underground (below).

Improving mine safety

A new mine safety bill approved during the 2006 New Mexico legislature will further improve the safety of New Mexico miners. This past year served as a reminder regarding the dangers associated with mining, whether for economic benefit, or in WIPP's case, environmental protection. The new bill (HB 687), introduced by Representative John A. Heaton (D-NM), incorporates a number of specific aspects, including accident reporting, emergency communications and miner protection.

The new bill requires each mine to prepare an emergency notification plan, which must be approved by the State Mine Inspector. Additionally, the State Mine Inspector must establish an emergency operations center to aid in dealing with accidents or emergencies encountered in the underground. Mine operators will have 30 minutes to report severe accidents to the State Mine Inspector. Failure to meet this new requirement will result in a penalty of up to $100,000 for the operator.

Changes associated with miner protection are a significant part of the new requirements. Operators must provide miners with emergency communication capabilities in each working area of the underground. This system must be capable of providing communications between the surface and underground. Mine operators must also ensure that all miners have access to self-contained self-rescue devices (SCSR). These devices must provide oxygen for at least one hour, or enough time to allow personnel to reach additional caches of rescue devices. Additional units must be cached, if needed, to enable individuals to evacuate the mine.

The most significant change for WIPP is the new requirement for underground caches of SCSRs. These caches will be placed throughout the mine in specific areas to accommodate the number of people who work in each area. As a result, underground access could become limited due to the number of available SCSRs underground. There will be 14 separate caches located in the WIPP underground, of which, three will be skid-mounted. The skid-mounted caches will be placed in the active disposal areas and the mining face. All caches will be identified by a continuous strobe light and a reflective sign. Additionally, signs will be placed throughout the underground directing individuals to these caches.

The new bill also identifies the need for communication with the surface in the event of an underground emergency. "This is a situation where, due to the importance

WIPP Safety Fair

Coming Soon!

See related article for details

Happy Birthday Wishes!

Sanford Watson (WTS)
June 22

Gary Morrison (WTS)
June 22

Lucy Rodriguez (L&M)
June 24

Wayne Ledford (CTAC)
June 27

Sylvia Sanborn (NCI)
June 30

Sheila Pearcy (Triumph)
July 4

BJ Verret (CTAC)
July 5

Is your birthday on our list? Employee birthdays are submitted once and must be re-approved for publication by you every year. Please submit birth dates to the TRU TeamWorks staff at: TRUTeamWorks@wipp.ws.

placed on safety at WIPP, we are already in compliance," said Jill Farnsworth, WIPP senior engineer. The mine phones located in both the underground and on the surface rely on battery power; therefore, in the event power is lost to the underground, communication can be maintained. Each underground cache will contain a mine phone with a selector switch. Redundant phone lines will be installed from adjacent entries to these cache locations. The selector switch will allow the user to select any redundant line in the event of an emergency. "Our system is very robust and reliable," adds Jerry Graham, WIPP mine engineer. "We have approximately 74 mine phones currently in the underground and each drift is independently connected to the main circuit. By this arrangement the mine phone system has a high degree of redundancy."

As a result of the new bill, all underground personnel will be required to undergo additional training. "Implementation of the overall plan will take time," adds Farnsworth. "There are only two manufacturers of approved SCSRs and their lead time is already approximately a year. As a result, there is no set implementation date for this bill, but sites must show continued improvements toward compliance."

Remote-handled Waste Series:

What is remote-handled transuranic waste?

Editor's note: This is the first installment of a series of articles in TRU TeamWorks about remote-handled transuranic waste.

Not all transuranic (TRU) waste is the same. TRU waste comes in two categories – contact-handled (CH) waste or remote-handled (RH) waste. Can you describe the difference between the two? CH and RH waste may physically look alike on the outside, but they have other characteristics that distinguish them.

In the first seven-plus years of WIPP's operating life, more than 79,000 containers of CH waste have been disposed of in the underground. Approximately 96 percent of the waste disposed at WIPP is expected to be CH so it has received the lion's share of attention. But with the possible first receipt of RH at WIPP on the horizon, a lot of focus is shifting to RH.

RH waste, like CH waste, generally consists of clothing, tools, rags, debris, residues and other items contaminated with man-made radioactive elements called transuranics. These elements are heavier than uranium and therefore are found beyond uranium on the periodic table of elements.

What distinguishes one type of TRU waste from the other, however, is its surface dose rate. This rate is the amount of radiation measured at the outside of the payload container, such as a 55-gallon drum, and is measured in units called a rem or a millirem (one thousandth of a rem) per hour.

Waste packages of CH waste have a surface dose rate not greater than 200

millirem per hour. RH waste packages, meanwhile, have a surface dose rate of more than 200 millirem per hour and no more than 1,000 rem per hour. By law, 95 percent of the RH waste to be disposed at WIPP will have a surface dose rate of less than 100 rem per hour.

Although approval is still pending with the New Mexico Environment Department, the disposal of RH waste at WIPP has long been a part of the plan for the facility. RH waste disposal was evaluated by WIPP's first environmental impact statement issued in October 1980. It was also addressed in the WIPP Land Withdrawal Act (LWA) of 1992, which notably bans the shipment to or disposal of high-level waste or spent nuclear fuel to WIPP.

The process of transporting and disposing of RH waste at WIPP will look very different than what we are used to with the CH waste process. The trucks arriving at WIPP's gates will not have the familiar TRUPACT-IIs or HalfPACTS on the trailer, but rather lead-lined casks. The waste will be handled with machinery and robotics. And the waste will not be stacked in disposal rooms, as we are accustomed, but rather inserted into boreholes in the walls of the disposal room and sealed with a cement plug.

Watch for the Remote-Handled Waste Series to continue in future issues of TRU TeamWorks.

Secretary Bodman addresses DOE-complex

DOE federal and contractor employees around the country gathered last week to watch or listen to Secretary of Energy Samuel Bodman. The address, which many viewed via satellite, covered some key accomplishments and several upcoming initiatives.

Secretary Bodman talked about five achievements in the past year.

- The Energy Policy Act that, after a four-year effort, was passed last summer
- The development of two presidential initiatives (American Competitiveness Initiative and Advanced Energy Initiative)
- The Yucca Mountain project moving forward with plans of leading to completion in a timely manner
- A comprehensive review of the global energy market that has developed the framework for the Global Nuclear Energy Partnership, which will be a new international partnership
- The Complex 20/30 Initiative, which will help transform the nuclear weapon stockpile in regard to national security and cost-effective management

The Secretary also focused on the future. He identified three main areas of improvement: a safer work environment, better organizational performance and more responsible stewardship of taxpayer resources. He named safety as his top priority and listed three goals: well crafted safety policies, stronger safety oversight at all levels and better communication.

"Achieving a safer, more secure department will require more than a simple organizational change," Bodman said. "It will also require, if you will, a shift of mindset."

The Secretary used the word “accountability” to describe the way to achieve organizational performance and responsible stewardship to taxpayers. He said that there must be accountability within the department to collaborate and communicate with on-site managers, as well as agency-wide. Bodman also said there is accountability to run the organization in a cost-effective manner to benefit the American taxpayers, while maintaining the DOE mission.

Bodman says he's pleased with what the department has done in the past year, and looks forward to the agency's future.

“I am extremely proud of what this department has done,” Bodman said. “I believe I will be even prouder in the future as we continue to improve and do an even better job as the months go by.”

Safety Fair is for all WIPP employees

Who do you work for? It doesn’t matter. When it comes to safety at WIPP, we’re all in this together.

That’s why the WTS Safety Awareness Committee holds its annual safety fair for everyone, not just WTS employees. “Our goal is to raise awareness so that we prevent injuries,” says Tom Ferguson, “Whether you’re a federal employee, contractor or subcontractor, we all depend on a safe work environment.”

Joel Siegel (WRES) cooking up burgers at last year's WIPP Safety Fair.

We have a lot to celebrate at this year's safety fair. Not only have WTS/WRES employees achieved two million consecutive safe-hours without a days-away-from-work injury or illness, but at the end of May, the entire WIPP project surpassed the three million safe-hours milestone. This achievement includes WTS/WRES, WTS subcontractors, the Carlsbad Field Office, the Carlsbad Technical Assistance Contractor and WIPP-related employees of Sandia National Laboratories and Los Alamos National Laboratory.

To accommodate everyone, the celebration will span a two-day period. In-town employees will celebrate on Tuesday, June 27 at the Skeen-Whitlock Building . Site employees will cap off the festivities the following day.

At both locations, WTS managers will be serving up hamburgers and hot dogs for everyone. Lines will begin to form at 11:00 a.m. Besides the food, there will be generous helpings of safety information available.

Congratulations to WIPP employees for a job well done!

Electronic review saves paper

More than 40 reams of paper did not have to be manufactured or purchased, or require recycling or disposal, thanks to excellent work by Ashlee Pennington and Remote-Handled (RH) Waste Operations. Their work saved more than 20,000 sheets of paper, which is equal to a stack of paper six-feet high.

Ashlee Pennington (TRU Staffing) stands by boxes of paper representing the paper saved by electronic review.

The RH Line Management Assessment began in January with over 300 affidavits to be completed before WIPP can begin the RH Program Operational Readiness Review. Each affidavit must be reviewed by a nine-person team, and approximately 25 percent of the affidavits require more than one review.

With each affidavit averaging six pages and copies being provided to each team member, this process presented a significant opportunity to reduce the paper resources used at WIPP. Pennington lead RH efforts to review the affidavits electronically, rather than by paper copies. Now, affidavits are scanned into an electronic file and projected on-screen for the team's review. In addition, all of the team's meeting minutes are distributed electronically.

Reducing the use of resources rather than having to dispose, or even recycle, waste materials is at the heart of Pollution Prevention (P2). Thanks to this good work, WIPP continues to implement efficiencies, reduce consumable use, and practice P2.

Submitted by Judy McLemore (WRES)

Leigh marks 25 years of service at SNL

Christi Leigh, celebrated her 25-year anniversary with Sandia National Laboratories on June 1. She began working at SNL in 1981 and was hired into a coal liquefaction group. Before she even started her first day of work, she had to transfer to a reactor safety group due to President Reagan's funding cuts for alternative energy programs.

Leigh holds a Ph.D in chemical engineering from the University of New Mexico, a master's in chemical engineering from Stanford University and a bachelor's from Arizona State University .

Her technical experience is varied and includes work in nuclear reactor safety, risk analysis for nuclear power plants, geochemical analyses of basalt, salt and tuff, mixed waste inventory reporting, treatment technologies for mixed waste, development of GENII-S and dose calculations for WIPP, the National TRU program, development of combined near-field transport/geochemistry model for Yucca Mountain Project (YMP) total systems performance assessment (TSPA), preparation of inventory basis for YMP TSPA and WIPP performance assessment and recertification.

Among her many leadership roles, Leigh has served as acting manager and technical lead for the National TRU Program, which she feels has been her most fulfilling work at Sandia because "The project was well run and the results were used in getting WIPP open."

Her first test as a principal investigator was, according to Leigh, "trial by fire." She directed the work of an older and more experienced staff. "At the end of this experience, I remember one of my colleagues saying, 'I remember when we would go to a meeting and you would not say a word – what happened to that Christi?'"

She started the white paper recycling program in Building 823, located at SNL in Albuquerque . She made all of the signs and posted them, set up the recycle bins and wrote a paper and presented it at a conference about white paper recycling in a secure environment. This was at a time when everyone at labs across the country thought you couldn't recycle for security reasons. She says the most exciting part of working on classified projects was meeting Edward Teller, one of the nation's pioneering scientists in the field of nuclear weapons.

"Sandia is a great place to work," says Leigh.

Submitted by Dina Howell, SNL-CPG